



SEQUENCE LISTING

<110> Evolutec Limited
<120> Ion Channel Modulators

<130> 2488-1-008

<140> 10/743,280
<141> 2003-12-22

<150> PCT/GB02/002919
<151> 2002-06-21

<150> GB0115363.4
<151> 2001-06-22

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<400> 1
taatacgact cactatag
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aattaaccct cactaaag
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<400> 3

gaygartgyc cnmgnatntg

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<210> 4

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<222> 9, 12, 15

<223> n = a, c, g, or t

<400> 4

gartgyccnm gnatntgy

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<210> 5

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<222> 3, 9

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<400> 5

acnttyggna aycartg

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<210> 6

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<220>
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<400> 6
aatacaacat attcaagtgg
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<400> 7
gtacggatcc atgaaatttg ccttggttcag t
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<210> 8
<211> 52
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<213> Artificial Sequence

<220>
<223> PCR primer - HR3

<400> 8
catgctgcag ttagtgatgg tgatgggtgat gacccttgca ctcgccatca tg
52

<210> 9
<211> 19
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<220>
<223> Primer - PFBR

<400> 9
gattatgatc ctctagtac
19

<210> 10

<211> 20
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<220>
 <223> Primer - PFBF

<400> 10
 tattccggat tattcatacc
 20

<210> 11
 <211> 76
 <212> PRT
 <213> Hybomitra bimaculata

<220>
 <221> SIGNAL
 <222> 1-20

<400> 11
 Met Lys Phe Ala Leu Phe Ser Val Leu Val Val Leu Leu Ile Ala Thr
 1 5 10 15
 Phe Val Ala Ala Asp Glu Cys Pro Arg Ile Cys Thr Ala Asp Tyr Arg
 20 25 30
 Pro Val Cys Gly Thr Pro Ser Gly Gly Arg Arg Ser Ala Asn Arg Thr
 35 40 45
 Phe Gly Asn Gln Cys Ser Leu Asn Ala His Asn Cys Leu Asn Lys Gly
 50 55 60
 Asp Thr Tyr Asp Lys Leu His Asp Gly Glu Cys Lys
 65 70 75

<210> 12
 <211> 331
 <212> DNA
 <213> Hybomitra bimaculata

<220>
 <221> CDS
 <222> 56-285

<220>
 <221> misc_feature
 <222> 48
 <223> n = a, c, g, or t

<400> 12
 gtttagttca gtttttatag taaccagttc taaaagttta ataacatnaa tcaaaatgaa
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 atttgccttg ttcagtgttt tagttgttct gctgattgca acatttggtg cggctgatga
 120
 atgccacgt atttgcacgg ctgactatag accggtatgc ggcactccct ctggtggtcg
 180
 ccgaagtgca aacaggactt ttggaaacca atgtagcctc aacgcccaca actgcttgaa
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 caagggagat acttacgaca aactgcatga tggcgagtgc aagtaaaaag gacaagtccc
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<210> 13
 <211> 61
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Kazal-type inhibitor consensus

<400> 13
 Cys Ser Arg Tyr Pro Asn Pro Thr Ser Lys Asp Gly Lys Leu Val Ala
 1 5 10 15
 Cys Pro Arg Glu Tyr Asp Pro Val Cys Gly Ser Asp Gly Val Thr Tyr
 20 25 30
 Ser Asn Glu Cys Glu Leu Lys Lys Ala Ala Cys Ala Glu Asn Val Glu
 35 40 45
 Gln Gly Thr Asn Ile Glu Lys Lys His Asp Gly Pro Cys
 50 55 60

<210> 14
 <211> 7
 <212> PRT
 <213> Hybomitra bimaculata

<400> 14
 Pro Ser Gly Gly Arg Arg Ser
 1 5

<210> 15
 <211> 43
 <212> PRT
 <213> Rhodnius prolixus

<400> 15
 Cys Ala Cys Pro His Ala Leu His Arg Val Cys Gly Ser Asp Gly Glu
 1 5 10 15

Thr Tyr Ser Asn Pro Cys Thr Leu Asn Val Ala Lys Phe Gly Lys Glu
 20 25 30

Pro Glu Leu Val Lys Val His Asp Gly Pro Cys
 35 40

<210> 16

<211> 45

<212> PRT

<213> Rhodnius prolixus

<400> 16

Cys Gln Glu Cys Asp Gly Asp Glu Tyr Lys Pro Val Cys Gly Ser Asp
 1 5 10 15

Asp Ile Thr Tyr Asp Asn Asn Cys Arg Leu Glu Cys Ala Ser Ile Ser
 20 25 30

Ser Ser Pro Gly Val Glu Leu Lys His Glu Gly Pro Cys
 35 40 45

<210> 17

<211> 45

<212> PRT

<213> Anemonia sulcata

<400> 17

Cys Pro Leu Ile Cys Thr Met Gln Tyr Asp Pro Val Cys Gly Ser Asp
 1 5 10 15

Gly Ile Thr Tyr Gly Asn Ala Cys Met Leu Leu Gly Ala Ser Cys Arg
 20 25 30

Ser Asp Thr Pro Ile Glu Leu Val His Lys Gly Arg Cys
 35 40 45

<210> 18

<211> 46

<212> PRT

<213> Gallus gallus

<400> 18

Cys Lys Lys Thr Ala Cys Pro Val Val Val Ala Pro Val Cys Gly Ser
 1 5 10 15

Asp Tyr Ser Thr Tyr Ser Asn Glu Cys Glu Leu Glu Lys Ala Gln Cys
 20 25 30

Asn Gln Gln Arg Arg Ile Lys Val Ile Ser Lys Gly Pro Cys
 35 40 45

<210> 19
 <211> 49
 <212> PRT
 <213> Homo sapiens

<400> 19
 Cys Ser Gln Tyr Arg Leu Pro Gly Cys Pro Arg His Phe Asn Pro Val
 1 5 10 15

Cys Gly Ser Asp Met Ser Thr Tyr Ala Asn Glu Cys Thr Leu Cys Met
 20 25 30

Lys Ile Arg Glu Gly Gly His Asn Ile Lys Ile Ile Arg Asn Gly Pro
 35 40 45

Cys

<210> 20
 <211> 45
 <212> PRT
 <213> Gallus gallus

<400> 20
 Cys Asp Phe Thr Cys Leu Ala Val Pro Arg Ser Pro Val Cys Gly Ser
 1 5 10 15

Asp Asp Val Thr Tyr Ala Asn Glu Cys Glu Leu Lys Lys Thr Arg Cys
 20 25 30

Glu Lys Arg Gln Asn Leu Val Thr Ser Gln Gly Ala Cys
 35 40 45

<210> 21
 <211> 46
 <212> PRT
 <213> Rattus norvegicus

<400> 21
 Cys Asp Phe Ser Cys Gln Ser Val Pro Arg Ser Pro Val Cys Gly Ser
 1 5 10 15

Asp Gly Val Thr Tyr Gly Thr Glu Cys Asp Leu Lys Lys Ala Arg Cys
 20 25 30

Glu Ser Gln Gln Glu Leu Tyr Val Ala Ala Gln Gly Ala Cys
 35 40 45

<210> 22

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<211>      47
<212>      PRT
<213>      Homo sapiens

<400>      22
Cys Ala Pro Asp Cys Ser Asn Ile Thr Trp Lys Gly Pro Val Cys Gly
1              5              10              15
Leu Asp Gly Lys Thr Tyr Arg Asn Glu Cys Ala Leu Leu Lys Ala Arg
              20              25              30
Cys Lys Glu Gln Pro Glu Leu Glu Val Gln Tyr Gln Gly Arg Cys
              35              40              45

<210>      23
<211>      46
<212>      PRT
<213>      Gallus gallus

<400>      23
Cys Pro Ala Ser Cys Ser Gly Val Ala Glu Ser Ile Val Cys Gly Ser
1              5              10              15
Asp Gly Lys Asp Tyr Arg Ser Glu Cys Asp Leu Asn Lys His Ala Cys
              20              25              30
Asp Lys Gln Glu Asn Val Phe Lys Lys Phe Asp Gly Ala Cys
              35              40              45

<210>      24
<211>      46
<212>      PRT
<213>      Rattus norvegicus

<400>      24
Cys Pro Thr Thr Cys Phe Gly Ala Pro Asp Gly Thr Val Cys Gly Ser
1              5              10              15
Asp Gly Val Asp Tyr Pro Ser Glu Cys Gln Leu Leu Ser His Ala Cys
              20              25              30
Ala Ser Gln Glu His Ile Phe Lys Lys Phe Asn Gly Pro Cys
              35              40              45

<210>      25
<211>      45
<212>      PRT
<213>      Gallus gallus

<400>      25
Cys Gln Gln Val Cys Gln Gly Arg Tyr Asp Pro Val Cys Gly Ser Asp
1              5              10              15

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Asn Arg Thr Tyr Gly Asn Pro Cys Glu Leu Asn Ala Met Ala Cys Val
 20 25 30

Leu Lys Arg Glu Ile Arg Val Lys His Lys Gly Pro Cys
 35 40 45

<210> 26

<211> 45

<212> PRT

<213> Rattus norvegicus

<400> 26

Cys Gln Arg Val Cys Ala Gly Ile Tyr Asp Pro Val Cys Gly Ser Asp
 1 5 10 15

Gly Val Thr Tyr Gly Ser Val Cys Glu Leu Glu Ser Met Ala Cys Thr
 20 25 30

Leu Gly Arg Glu Ile Gln Val Ala Arg Arg Gly Pro Cys
 35 40 45

<210> 27

<211> 49

<212> PRT

<213> Rattus norvegicus

<400> 27

Cys Glu His Met Thr Glu Ser Pro Asp Cys Ser Arg Ile Tyr Asp Pro
 1 5 10 15

Val Cys Gly Thr Asp Gly Thr Tyr Glu Ser Glu Cys Lys Leu Cys Leu
 20 25 30

Ala Arg Ile Glu Asn Lys Gln Asp Ile Gln Ile Val Lys Asp Gly Glu
 35 40 45

Cys

<210> 28

<211> 48

<212> PRT

<213> Rattus norvegicus

<400> 28

Cys Pro Lys Gln Ile Met Gly Cys Pro Arg Ile Tyr Asp Pro Val Cys
 1 5 10 15

Gly Thr Asn Gly Ile Thr Tyr Pro Ser Glu Cys Ser Leu Cys Phe Glu
 20 25 30

Asn Arg Lys Phe Gly Thr Ser Ile His Ile Gln Arg Arg Gly Thr Cys
 35 40 45

<210> 29
 <211> 48
 <212> PRT
 <213> Rattus norvegicus

<400> 29
 Cys Pro Asn Thr Leu Val Gly Cys Pro Arg Asp Tyr Asp Pro Val Cys
 1 5 10 15

Gly Thr Asp Gly Lys Thr Tyr Ala Asn Glu Cys Ile Leu Cys Phe Glu
 20 25 30

Asn Arg Lys Phe Gly Thr Ser Ile Arg Ile Gln Arg Arg Gly Leu Cys
 35 40 45

<210> 30
 <211> 48
 <212> PRT
 <213> Bos taurus

<400> 30
 Cys Thr Asn Glu Val Asn Gly Cys Pro Arg Ile Tyr Asn Pro Val Cys
 1 5 10 15

Gly Thr Asp Gly Val Thr Tyr Ser Asn Glu Cys Leu Leu Cys Met Glu
 20 25 30

Asn Lys Glu Arg Gln Thr Pro Val Leu Ile Gln Lys Ser Gly Pro Cys
 35 40 45

<210> 31
 <211> 47
 <212> PRT
 <213> Canis familiaris

<400> 31
 Cys Asn Leu Lys Val Asn Gly Cys Asn Lys Ile Tyr Asn Pro Ile Cys
 1 5 10 15

Gly Ser Asp Gly Ile Thr Tyr Ala Asn Cys Leu Leu Cys Leu Glu Asn
 20 25 30

Lys Lys Arg Gln Thr Ser Ile Leu Val Glu Lys Ser Gly Pro Cys
 35 40 45

<210> 32

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<211>    45
<212>    PRT
<213>    Gallus gallus

<400>    32
Cys Pro Thr Glu Cys Val Pro Ser Ser Gln Pro Val Cys Gly Thr Asp
1          5          10          15
Gly Asn Thr Tyr Gly Ser Glu Cys Glu Leu His Val Arg Ala Cys Thr
          20          25          30
Gln Gln Lys Asn Ile Leu Val Ala Ala Gln Gly Asp Cys
          35          40          45

<210>    33
<211>    45
<212>    PRT
<213>    Rattus norvegicus

<400>    33
Cys Pro Ser Glu Cys Val Glu Ser Ala Gln Pro Val Cys Gly Ser Asp
1          5          10          15
Gly His Thr Tyr Ala Ser Glu Cys Glu Leu His Val His Ala Cys Thr
          20          25          30
His Gln Ile Ser Leu Tyr Val Ala Ser Ala Gly His Cys
          35          40          45

<210>    34
<211>    45
<212>    PRT
<213>    Gallus gallus

<400>    34
Cys Pro Arg Cys Glu Gln Gln Pro Leu Ala Gln Val Cys Gly Thr Asp
1          5          10          15
Gly Leu Thr Tyr Asp Asn Arg Cys Glu Leu Arg Ala Ala Ser Cys Gln
          20          25          30
Gln Gln Lys Ser Ile Glu Val Ala Lys Met Gly Pro Cys
          35          40          45

<210>    35
<211>    45
<212>    PRT
<213>    Rattus norvegicus

<400>    35
Cys Pro Arg Cys Glu His Pro Pro Pro Gly Pro Val Cys Gly Ser Asp
1          5          10          15

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Gly Val Thr Tyr Leu Ser Ala Cys Glu Leu Arg Glu Ala Ala Cys Gln
 20 25 30

Gln Gln Val Gln Ile Glu Glu Ala His Ala Gly Pro Cys
 35 40 45

<210> 36

<211> 47

<212> PRT

<213> Gallus gallus

<400> 36

Cys Pro Ser Pro Leu Cys Ser Glu Ala Asn Met Thr Lys Val Cys Gly
 1 5 10 15

Ser Asp Gly Val Thr Tyr Gly Asp Gln Cys Gln Leu Lys Thr Ile Ala
 20 25 30

Cys Arg Gln Gly Gln Leu Ile Thr Val Lys His Val Gly Gln Cys
 35 40 45

<210> 37

<211> 47

<212> PRT

<213> Rattus norvegicus

<400> 37

Cys Pro Thr Leu Thr Cys Pro Glu Ala Asn Ser Thr Lys Val Cys Gly
 1 5 10 15

Ser Asp Gly Val Thr Tyr Gly Asn Glu Cys Gln Leu Lys Ala Ile Ala
 20 25 30

Cys Arg Gln Arg Leu Asp Ile Ser Thr Gln Ser Leu Gly Pro Cys
 35 40 45

<210> 38

<211> 58

<212> PRT

<213> Gallus gallus

<400> 38

Cys Ser Leu Tyr Ala Ser Gly Ile Gly Lys Asp Gly Thr Ser Trp Val
 1 5 10 15

Ala Cys Pro Arg Asn Leu Lys Pro Val Cys Gly Thr Asp Gly Ser Thr
 20 25 30

Tyr Ser Asn Glu Cys Gly Ile Cys Leu Tyr Asn Arg Glu His Gly Ala
 35 40 45

Asn Val Glu Lys Glu Tyr Asp Gly Glu Cys
50 55

<210> 39
<211> 57
<212> PRT
<213> Gallus gallus

<400> 39
Cys Ser Pro Tyr Leu Gln Val Val Arg Asp Gly Asn Thr Met Val Ala
1 5 10 15

Cys Pro Arg Ile Leu Lys Pro Val Cys Gly Ser Asp Ser Phe Thr Tyr
20 25 30

Asp Asn Glu Cys Gly Ile Cys Ala Tyr Asn Ala Glu His His Thr Asn
35 40 45

Ile Ser Lys Leu His Asp Gly Glu Cys
50 55

<210> 40
<211> 58
<212> PRT
<213> Gallus gallus

<400> 40
Cys Ser Lys Tyr Pro Ser Thr Val Ser Lys Asp Gly Arg Thr Leu Val
1 5 10 15

Ala Cys Pro Arg Ile Leu Ser Pro Val Cys Gly Thr Asp Gly Phe Thr
20 25 30

Tyr Asp Asn Glu Cys Gly Ile Cys Ala His Asn Ala Glu Gln Arg Thr
35 40 45

His Val Ser Lys Lys His Asp Gly Lys Cys
50 55

<210> 41
<211> 58
<212> PRT
<213> Gallus gallus

<400> 41
Cys Asp Gln Tyr Pro Thr Arg Lys Thr Thr Gly Gly Lys Leu Leu Val
1 5 10 15

Arg Cys Pro Arg Ile Leu Leu Pro Val Cys Gly Thr Asp Gly Phe Thr
20 25 30

Tyr Asp Asn Glu Cys Gly Ile Cys Ala His Asn Ala Gln His Gly Thr

| | | | | | |
|---|-----------------------------|-----------------|----|--|----|
| | 35 | | 40 | | 45 |
| Glu Val | Lys Lys Ser His | Asp Gly Arg Cys | | | |
| 50 | | 55 | | | |
| <210> | 42 | | | | |
| <211> | 58 | | | | |
| <212> | PRT | | | | |
| <213> | Gallus gallus | | | | |
| <400> | 42 | | | | |
| Cys Ser Arg Phe Pro Asn Ala Thr Asp | Lys Glu Gly Lys Asp Val Leu | | | | |
| 1 | 5 | 10 | 15 | | |
| Val Cys Asn Lys Asp Leu Arg Pro Ile Cys Gly Thr Asp Gly Val Thr | | | | | |
| | 20 | 25 | 30 | | |
| Tyr Thr Asn Asp Cys Leu Leu Cys Ala Tyr Ser Ile Glu Phe Gly Thr | | | | | |
| | 35 | 40 | 45 | | |
| Asn Ile Ser Lys Glu His Asp Gly Glu Cys | | | | | |
| 50 | | 55 | | | |
| <210> | 43 | | | | |
| <211> | 58 | | | | |
| <212> | PRT | | | | |
| <213> | Coturnix coturnix | | | | |
| <400> | 43 | | | | |
| Cys Ser Arg Phe Pro Asn Thr Thr Asn Glu Glu Gly Lys Asp Glu Val | | | | | |
| 1 | 5 | 10 | 15 | | |
| Val Cys Pro Asp Glu Leu Arg Leu Ile Cys Gly Thr Asp Gly Val Thr | | | | | |
| | 20 | 25 | 30 | | |
| Tyr Asn His Glu Cys Met Leu Cys Phe Tyr Asn Lys Glu Tyr Gly Thr | | | | | |
| | 35 | 40 | 45 | | |
| Asn Ile Ser Lys Glu Gln Asp Gly Glu Cys | | | | | |
| 50 | | 55 | | | |
| <210> | 44 | | | | |
| <211> | 58 | | | | |
| <212> | PRT | | | | |
| <213> | Gallus gallus | | | | |
| <400> | 44 | | | | |
| Cys Ser Ser Tyr Ala Asn Thr Thr Ser Glu Asp Gly Lys Val Met Val | | | | | |
| 1 | 5 | 10 | 15 | | |
| Leu Cys Asn Arg Ala Phe Asn Pro Val Cys Gly Thr Asp Gly Val Thr | | | | | |
| | 20 | 25 | 30 | | |

Tyr Asp Asn Glu Cys Leu Leu Cys Ala His Lys Val Glu Gln Gly Ala
 35 40 45

Ser Val Asp Lys Arg His Asp Gly Gly Cys
 50 55

<210> 45

<211> 58

<212> PRT

<213> Coturnix coturnix

<400> 45

Cys Ser Arg Tyr Pro Asn Thr Thr Ser Glu Asp Gly Lys Val Thr Ile
 1 5 10 15

Leu Cys Thr Lys Asp Phe Ser Phe Val Cys Gly Thr Asp Gly Val Thr
 20 25 30

Tyr Asp Asn Glu Cys Met Leu Cys Ala His Asn Val Val Gln Gly Thr
 35 40 45

Ser Val Gly Lys Lys His Asp Gly Glu Cys
 50 55

<210> 46

<211> 58

<212> PRT

<213> Gallus gallus

<400> 46

Cys Ser Lys Tyr Lys Thr Ser Thr Leu Lys Asp Gly Arg Gln Val Val
 1 5 10 15

Ala Cys Thr Met Ile Tyr Asp Pro Val Cys Ala Thr Asn Gly Val Thr
 20 25 30

Tyr Ala Ser Glu Cys Thr Leu Cys Ala His Asn Leu Glu Gln Arg Thr
 35 40 45

Asn Leu Gly Lys Arg Lys Asn Gly Arg Cys
 50 55

<210> 47

<211> 50

<212> PRT

<213> Anguilla anguilla

<400> 47

Cys Gly Glu Met Ser Ala Met His Ala Cys Pro Met Asn Phe Ala Pro
 1 5 10 15

Val Cys Gly Thr Asp Gly Asn Thr Tyr Pro Asn Glu Cys Ser Leu Cys
20 25 30

Phe Gln Arg Gln Asn Thr Lys Thr Asp Ile Leu Ile Thr Lys Asp Asp
35 40 45

Arg Cys
50

<210> 48
<211> 46
<212> PRT
<213> Gallus gallus

<400> 48
Cys Asp Arg Ile Thr Cys Asp Gly Thr Tyr Arg Pro Val Cys Ala Arg
1 5 10 15

Asp Ser Arg Thr Tyr Ser Asn Asp Cys Glu Arg Gln Lys Ala Glu Cys
20 25 30

His Gln Lys Ala Ala Ile Pro Val Lys His Ser Gly Pro Cys
35 40 45

<210> 49
<211> 46
<212> PRT
<213> Rattus norvegicus

<400> 49
Cys Asp Arg Val Thr Cys Asp Gly Ser Tyr Arg Pro Val Cys Ala Gln
1 5 10 15

Asp Gly His Thr Tyr Asn Asn Asp Cys Trp Arg Gln Gln Ala Glu Cys
20 25 30

Arg Gln Gln Arg Ala Ile Pro Pro Lys His Gln Gly Pro Cys
35 40 45

<210> 50
<211> 47
<212> PRT
<213> Homo sapiens

<400> 50
Cys Asp Glu Leu Cys Pro Asp Ser Lys Ser Asp Glu Pro Val Cys Ala
1 5 10 15

Ser Asp Asn Ala Thr Tyr Ala Ser Glu Cys Ala Met Lys Glu Ala Ala
20 25 30

Cys Ser Ser Gly Val Leu Leu Glu Val Lys His Ser Gly Ser Cys


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          35              40              45

<210>    51
<211>    53
<212>    PRT
<213>    Canis familiaris

<400>    51
Cys Ser Asn Tyr Lys Gly Lys Gly Ser Gln Ile Ala Cys Pro Arg Leu
1              5              10              15

His Gln Pro Ile Cys Gly Thr Asp His Lys Thr Tyr Ser Asn Glu Cys
          20              25              30

Met Phe Cys Ala Leu Thr Leu Asn Lys Lys Phe Glu Val Arg Lys Leu
          35              40              45

Gln Asp Thr Ala Cys
      50

<210>    52
<211>    53
<212>    PRT
<213>    Meles meles

<400>    52
Cys Ser Lys Tyr Asn Ala Lys Gly Ser Gln Phe Ala Cys Ser Arg His
1              5              10              15

Leu Asp Pro Val Cys Gly Thr Asp His Arg Thr Tyr Ser Asn Glu Cys
          20              25              30

Met Phe Cys Met Leu Thr Gln Asn Lys Arg Phe Ser Val Arg Ile Leu
          35              40              45

Gln Asp Asn Asn Cys
      50

<210>    53
<211>    53
<212>    PRT
<213>    Felis silvestris catus

<400>    53
Cys Ser Gln Tyr Asn Arg Lys Gly Ser Gly Ile Thr Cys Ser Lys Glu
1              5              10              15

Trp Lys Pro Ile Cys Gly Ile Asp His Lys Thr Tyr Ser Asn Glu Cys
          20              25              30

Met Phe Cys Gln Leu Asn Gln Asn Lys Arg Phe Gln Leu Arg Lys Leu
          35              40              45

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His Asp Asn Lys Cys
50

<210> 54
<211> 48
<212> PRT
<213> Bos taurus

<400> 54
Cys Lys Val Tyr Thr Glu Ala Cys Thr Arg Glu Tyr Asn Pro Ile Cys
1 5 10 15
Asp Ser Ala Ala Lys Thr Tyr Ser Asn Glu Cys Thr Phe Cys Asn Glu
20 25 30
Lys Met Asn Asn Asp Ala Asp Ile His Phe Asn His Phe Gly Glu Cys
35 40 45

<210> 55
<211> 51
<212> PRT
<213> Sus scrofa

<400> 55
Cys Asn Val Tyr Arg Ser His Leu Phe Phe Cys Thr Arg Gln Met Asp
1 5 10 15
Pro Ile Cys Gly Thr Asn Gly Lys Ser Tyr Ala Asn Pro Cys Ile Phe
20 25 30
Cys Ser Glu Lys Gly Leu Arg Asn Gln Lys Phe Asp Phe Gly His Trp
35 40 45

Gly His Cys
50

<210> 56
<211> 51
<212> PRT
<213> Bos taurus

<400> 56
Cys Ala Glu Phe Lys Asp Pro Lys Val Tyr Cys Thr Arg Glu Ser Asn
1 5 10 15
Pro His Cys Gly Ser Asn Gly Glu Thr Tyr Gly Asn Lys Cys Ala Phe
20 25 30
Cys Lys Ala Val Met Lys Ser Gly Gly Lys Ile Asn Leu Lys His Arg
35 40 45

Gly Lys Cys
50

<210> 57
<211> 51
<212> PRT
<213> Gallus gallus

<400> 57
Cys Arg Glu Phe Gln Lys Val Ser Pro Ile Cys Thr Met Glu Tyr Val
1 5 10 15
Pro His Cys Gly Ser Asp Gly Val Thr Tyr Ser Asn Arg Cys Phe Phe
20 25 30
Cys Asn Ala Tyr Val Gln Ser Asn Arg Thr Leu Asn Leu Val Ser Met
35 40 45

Ala Ala Cys
50

<210> 58
<211> 49
<212> PRT
<213> Aburria pipile

<400> 58
Cys Ser Asp His Pro Lys Pro Ala Cys Leu Gln Glu Gln Lys Pro Leu
1 5 10 15
Cys Gly Ser Asp Asn Lys Thr Tyr Asp Asn Lys Cys Ser Phe Cys Asn
20 25 30
Ala Val Val Asp Ser Asn Gly Thr Leu Thr Leu Ser Gly Phe Gly Lys
35 40 45

Cys

<210> 59
<211> 49
<212> PRT
<213> Coqui francolin

<400> 59
Cys Ser Glu Tyr Pro Lys Pro Gly Cys Thr Met Glu Tyr Arg Pro Val
1 5 10 15
Cys Gly Ser Asp Asn Ile Thr Tyr Gly Asn Lys Cys Asn Phe Cys Asn
20 25 30

Ala Val Val Lys Ser Asn Gly Thr Leu Thr Leu Ser His Phe Gly Lys
 35 40 45

Cys

<210> 60
 <211> 49
 <212> PRT
 <213> Casuarius casuarius

<400> 60
 Cys Ser Glu Tyr Pro Lys Pro Val Cys Ser Pro Glu Tyr Met Pro Leu
 1 5 10 15

Cys Gly Ser Asp Ser Lys Thr Tyr Asn Asn Lys Cys Asp Phe Cys Ser
 20 25 30

Ala Val Val Glu Ser Asn Gly Thr Leu Thr Leu Gly His Phe Gly Lys
 35 40 45

Cys

<210> 61
 <211> 47
 <212> PRT
 <213> Eudromia elegans

<400> 61
 Cys Ser Gly Tyr Pro Lys Pro Ala Cys Thr Leu Glu Phe Phe Pro Leu
 1 5 10 15

Cys Gly Ser Asp Asn Gln Thr Tyr Ser Asn Lys Cys Ala Phe Cys Asn
 20 25 30

Ala Ala Val Glu Lys Asn Val Thr Leu Asn His Ile Gly Glu Cys
 35 40 45

<210> 62
 <211> 48
 <212> PRT
 <213> Canis familiaris

<400> 62
 Cys Thr Glu Tyr Ser Asp Met Cys Thr Met Asp Tyr Arg Pro Leu Cys
 1 5 10 15

Gly Ser Asp Gly Lys Asn Tyr Ser Asn Lys Cys Ser Phe Cys Asn Ala
 20 25 30

Val Lys Lys Ser Arg Gly Thr Ile Phe Leu Ala Lys His Gly Glu Cys

35

40

45

<210> 63
 <211> 48
 <212> PRT
 <213> *Felis silvestris catus*

<400> 63
 Cys Thr Asn Tyr Ser Ala Ile Cys Thr Met Glu Tyr Phe Pro Leu Cys
 1 5 10 15
 Gly Ser Asp Gly Gln Glu Tyr Ser Asn Lys Cys Leu Phe Cys Asn Glu
 20 25 30
 Val Val Lys Arg Arg Gly Thr Leu Phe Leu Ala Lys Tyr Gly Gln Cys
 35 40 45

<210> 64
 <211> 47
 <212> PRT
 <213> *Gallus gallus*

<400> 64
 Leu Ser Arg Pro Glu Asn Cys Pro Ser Lys Arg Glu Pro Val Cys Gly
 1 5 10 15
 Asp Asp Gly Val Thr Tyr Ala Ser Glu Cys Val Met Gly Arg Thr Gly
 20 25 30
 Ala Ile Arg Gly Leu Glu Ile Gln Lys Val Arg Ser Gly Gln Cys
 35 40 45

<210> 65
 <211> 48
 <212> PRT
 <213> *Rattus norvegicus*

<400> 65
 Met Leu Leu Arg Pro Glu Asn Cys Pro Ala Gln His Thr Pro Ile Cys
 1 5 10 15
 Gly Asp Asp Gly Val Thr Tyr Glu Asn Asp Cys Val Met Ser Arg Ile
 20 25 30
 Gly Ala Arg Glu Gly Leu Leu Leu Gln Lys Val Arg Ser Gly Gln Cys
 35 40 45

<210> 66
 <211> 48

<212> PRT
 <213> Homo sapiens

<400> 66
 Cys Asn Arg Ile Cys Pro Glu Pro Ala Ser Ser Glu Gln Tyr Leu Cys
 1 5 10 15
 Gly Asn Asp Gly Val Thr Tyr Ser Ser Ala Cys His Leu Arg Lys Ala
 20 25 30
 Thr Cys Leu Leu Gly Arg Ser Ile Gly Leu Ala Tyr Glu Gly Lys Cys
 35 40 45

<210> 67
 <211> 54
 <212> PRT
 <213> Coturnix coturnix

<400> 67
 Cys Gln Asp Pro Ala Ala Cys Pro Ser Thr Lys Asp Tyr Lys Arg Val
 1 5 10 15
 Cys Gly Thr Asp Asn Lys Thr Tyr Asp Gly Thr Cys Gln Leu Phe Gly
 20 25 30
 Thr Lys Cys Gln Leu Glu Gly Thr Lys Met Gly Arg Gln Leu His Leu
 35 40 45
 Asp Tyr Met Gly Ala Cys
 50

<210> 68
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<400> 68
 Cys Gln Asp Pro Glu Thr Cys Pro Pro Ala Lys Ile Leu Asp Gln Ala
 1 5 10 15
 Cys Gly Thr Asp Asn Gln Thr Tyr Ala Ser Ser Cys His Leu Phe Ala
 20 25 30
 Thr Lys Cys Met Leu Glu Gly Thr Lys Lys Gly His Gln Leu Gln Leu
 35 40 45
 Asp Tyr Phe Gly Ala Cys
 50

<210> 69
 <211> 55

<212> PRT

<213> Bos taurus

<400> 69

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Gln | Asp | Pro | Thr | Ser | Cys | Pro | Ala | Pro | Ile | Gly | Glu | Phe | Glu | Lys |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Cys | Ser | Asn | Asp | Asn | Lys | Thr | Phe | Asp | Ser | Ser | Cys | His | Phe | Phe |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Thr | Lys | Cys | Thr | Leu | Glu | Gly | Thr | Lys | Lys | Gly | His | Lys | Leu | His |
| | | 35 | | | | | 40 | | | | | 45 | | | |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asp | Tyr | Ile | Gly | Pro | Cys |
| | 50 | | | | | 55 |